

## CLAIM AMENDMENTS

Please replace the pending claims with the following claim listing:

1-9. (Cancelled)

10. (New) An engine management system operating in conjunction with a sensor located in contact with the medium of a combustion chamber of an internal combustion engine and processing means for controlling the spark and injection process of said engine; wherein said engine management system operates with a single sensor; whereby the engine management system uses only the input from one sensor; and said sensor monitors in-cycle combustion conditions by comparing current cycle data with reference cycles; whereby closed loop control of the combustion events occurs throughout the combustion cycles.

11. (New) An engine management system according to Claim 10, wherein the sensor is located in contact with the medium of a single combustion chamber engine.

12. (New) An engine management system according to Claim 10, wherein said single sensor is part of a combined spark and injector plug.

13. (New) An engine management system according to Claim 10, wherein the sensor delivers data to the processing means to determine at least the crankshaft position of said engine.

14. (New) An engine management system according to Claim 10, wherein the processing means analyses the data delivered to establish the rate of pressure rise to determine trapped air volume in cylinder.

15. (New)An engine management system according to Claim 10, wherein the processing means analyses the data delivered to establish the operation history of the engine.

16. (New)An engine management system according to Claim 10, wherein the sensor incorporates a deformable member in close proximity to the medium.

17. (New) An engine management system according to Claim 12, wherein the sensor is located radially outwards from the plug's central axis.